Goddard SPACE FLIGHT CENTER

SPACE TELESCOPE SCIENCE INSTITUTE
Operated for NASA by AURA

JPL

marshall

The 2013 NASA Astrophysics Roadmap calls for a large observatory for the 2020s operating over the same wavelengths as HST.

Beyond JWST & AFTA: Extending Our UV/visual/Near-IR View of the Cosmos

The Advanced Technology Large-Aperture Space Telescope (ATLAST)

Basic ATLAST Mission Description

- International space observatory preparing for the 2020 NRC Decadal Survey
- Collaborative study among GSFC, JPL, STScI, and MSFC
- Powerful general-purpose observatory
- Design focus: large-aperture (~9 m) segmented mirror operating at UV/Visible/Near IR carried by EELV
  - *Design extendable to ~16 m if SLS is available*
  - *SLS availability allows ~8 m monolith as an option*
  - *Serviceable and possibility for in-space assembly/upgrade*

Additional information: http://asd.gsfc.nasa.gov/ATLAST/

Science Goals Build Upon the Heritage of HST

- The astronomical search for biosignatures in Earth-like planets in the solar neighborhood
- Enabling a comprehensive theory of star formation via detailed observations of stars in many times more galaxies
- Vastly broaden understanding of galaxy evolution by
  - *mapping the flow of circumgalactic gas in local galaxies and*
  - *measuring the structure, energetics, and star formation in the youngest galaxies.*

➢ *Working in parallel with the community-led AURA "Beyond JWST" study.*